

What is claimed is:

1. An OFDM signal transmission system comprising:
 - a first reception block equipped with a first reception section that receives a first transmission signal sent from a transmission station that transmits a modulated signal modulated according to an OFDM modulation system using a first frequency band, a tuning section that tunes the first received signal, a first demodulation section that demodulates the first received signal and an output section; and
 - a second reception block equipped with a second reception section capable of receiving a second transmission signal sent from a transmission/reception station that carries out reception using a second frequency band which is different from the first frequency band and a second demodulation section that demodulates the second received signal, wherein the identification information of transmission/reception station included in the second received signal and/or information to perform at least one of tuning or demodulation of said first transmission signal is received, transmission information to perform at least one of tuning or demodulation of the first transmission signal is obtained, at least one of tuning or demodulation of the first received signal is performed at said first demodulation section.

2. An OFDM signal transmission system comprising:

a first reception block equipped with a first reception section that receives a first transmission signal sent from a transmission station that transmits a modulated signal modulated according to an OFDM modulation system using a first frequency band, a tuning section that tunes the first received signal, a first demodulation section that demodulates the first received signal and an output section; and

a second reception block equipped with a second reception section capable of receiving a second transmission signal sent from a transmission/reception station that carries out reception using a second frequency band which is different from the first frequency band and a second demodulation section that demodulates the second received signal, wherein the identification information of transmission/reception station included in the second received signal and/or information to perform tuning and/or demodulation of said first transmission signal is received, transmission information to perform tuning and/or demodulation of the first transmission signal is obtained, tuning and/or demodulation of the first received signal is performed at said tuning section and/or said first demodulation section.

3. An OFDM signal transmission system comprising:

a first reception block equipped with a first reception section that receives a first transmission signal sent from a transmission station that transmits a modulated signal modulated according to an OFDM 5 modulation system using a first frequency band, a tuning section that tunes the first received signal, a first demodulation section that demodulates the first received signal and an output section; and

a second reception block equipped with a second reception section capable of receiving a second transmission signal sent from a transmission/reception station that carries out reception using a second frequency band which is different from the first frequency band and a second demodulation section that demodulates 15 the second received signal, wherein the identification information of transmission/reception station included in the second received signal and/or information to perform tuning and/or demodulation of said first transmission signal is received, transmission 20 information to perform tuning and/or demodulation of the first transmission signal is obtained, tuning and/or demodulation of the first received signal is performed at said tuning section and/or said first demodulation section, the demodulation data is displayed on the data 25 display section.

4. A portable terminal comprising:

receiving means;
barcode forming means for forming barcodes; and
displaying means, wherein said barcode forming
means forms a barcode from the data received by said
receiving means and said displaying means displays said
formed barcode.

5. The portable terminal according to claim 4, further comprising detecting means for detecting light or a signal
10 from a barcode reader provided near said displaying means.

6. The portable terminal according to claim 5, wherein
barcodes displayed on said displaying means are updated
one by one according to the detection result of said
detecting means.

7. A portable terminal comprising:
receiving means;
barcode forming means for forming barcodes based
20 on a received signal; and
displaying means including a main display section
and a sub-display section, wherein said barcode is
displayed on said sub-display section.

25 8. The portable terminal according to claim 7, wherein
said sub-display section has higher resolution than said
main display section.

9. The portable terminal according to claim 7, wherein said main display section has a color filter layer and said sub-display section has no color filter layer.

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10. The portable terminal according to claim 7, wherein data to be displayed on said sub-display section is divided into a plurality of pieces of data and said sub-display section displays a barcode a plurality of times with some 10 pieces of data at a time.

11. The portable terminal according to claim 7, wherein said main display section displays two-dimensional barcodes.

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12. The portable terminal according to claim 11, wherein said one-dimensional barcodes and/or said two-dimensional barcodes are adaptively displayed according to the amount of data to be displayed with 20 barcodes or instructions.

13. The portable terminal according to claim 12, wherein timing of updating display barcode patterns to be displayed on each display section is adaptively selected 25 according to the amount of data to be displayed with barcodes or instructions.

14. The portable terminal according to claim 11, wherein
timing of updating the display of barcode patterns is
selected so that one-dimensional barcodes to be displayed
on the sub-display section and two-dimensional barcodes
5 to be displayed on the main display section have the same
amount of information displayed per unit time.

15. A portable terminal comprising:

receiving means;

10 barcode forming means for forming barcodes based
on a received signal; and

displaying means for displaying said barcodes,
wherein when barcodes are displayed a plurality of times
on said display section, barcodes are displayed a
15 plurality of times with predetermined non-display periods
inserted between barcode display periods.

16. The portable terminal according to claim 15, wherein
said barcode display period is selected to be longer than
20 said non-display period.

17. The portable terminal according to claim 15, wherein
a plurality of barcodes is formed for each of a plurality
of pieces of information, each piece of information is
25 displayed with a plurality of barcodes with a
predetermined non-display period inserted between
barcode display periods and the non-display period

between barcodes corresponding to a break point of information is made longer than the non-display period within each piece of information.

5 18. A portable terminal comprising:
receiving means;
barcode forming means for forming barcodes based
on a received signal; and
displaying means for displaying said barcode,
10 wherein when displaying section in said displaying means
displays barcodes a plurality of times, the start part
of the barcode shows a display order number indicating
the displaying order and a total number of barcodes
displayed.

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19. A portable terminal comprising:
receiving means;
barcode forming means for forming barcodes based
on a received signal;
20 displaying means for displaying said barcode; and
a barcode display switch to display a barcode on
said displaying means, wherein when said barcode display
switch is operated, an entry of a preset password is
requested and no barcode is displayed when a correct
25 password is not entered.

20. The portable terminal according to claim 4, further

comprising encryption processing means, wherein said encryption processing means encrypts the data received by said receiving means, said barcode forming means forms barcode data from the data encrypted by said encryption processing means and said displaying means displays said formed barcode data.

21. A portable terminal comprising:

receiving means for receiving signals sent by radio;
10 barcode forming means for forming barcodes; and
displaying means; and
local radio communicating means, wherein the local
radio communicating means searches for the received
identification information from the data received by said
15 receiving means and said displaying means displays the
searched data as a barcode.

22. An electronic commerce system comprising:

a portable terminal;
20 an information transmission apparatus that sends
product information or service information to said
portable terminal; and
a distribution control apparatus that controls
electronic commercial transaction information, wherein
25 said portable terminal receives product information or
service information through said information
transmission apparatus and receives auxiliary

information on said product information or service
information from said distribution control apparatus.

23. The electronic commerce system according to claim
5 22, wherein said product information or service
information sent by said information transmission
apparatus is broadcast signals and said portable terminal
performs bi-directional communication with said
distribution control apparatus.

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24. The electronic commerce system according to claim 22, wherein said auxiliary information is information suitable for the portable terminal or the portable terminal user.

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25. An electronic commerce system comprising:

a portable terminal;

a shop terminal equipped with a barcode reader provided at a shop where products are delivered; and

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a distribution control apparatus that controls electronic commercial transaction information, wherein said portable terminal displays the product information, service information or information on commercial transaction received from said distribution control apparatus as barcodes, said barcode reader reads barcodes displayed on the portable terminal, said shop terminal or said distribution control apparatus executes

settlement based on the information of the barcode read by the barcode reader.

26. An electronic commerce system comprising:

5 a portable terminal;

 a shop terminal equipped with a barcode reader and a collating apparatus provided at a shop where products are delivered; and

 an information transmission apparatus that

10 transmits product information by radio, wherein said information transmission apparatus sends said product information by radio to both said portable terminal and said shop terminal, said portable terminal displays data according to the received product information on the

15 display section as a barcode, said shop terminal reads the barcode displayed by said barcode reader on the portable terminal and said collating apparatus collates the information of the barcode read by the barcode reader with the product information received from said

20 information transmission apparatus.

27. An electronic commerce system comprising:

 a portable terminal;

 a shop terminal equipped with a barcode reader and

25 a collating apparatus provided at a shop where products are delivered;

 an information transmission apparatus that

transmits product information or service information to said portable terminal; and

a distribution control apparatus that controls electronic commercial transaction information, wherein
5 said portable terminal displays product information received from said information transmission apparatus or information on the product selected by the portable terminal user as a barcode, said barcode reader reads the barcode displayed on the portable terminal, said
10 collating apparatus collates the information of the barcode read by the barcode reader with the control information sent from said distribution control apparatus and sends the commercial transaction information to said distribution control apparatus and said distribution
15 control apparatus changes the control information based on the commercial transaction information.

28. The electronic commerce system according to claim 27, wherein said information transmission apparatus sends
20 product information according to the position of said portable terminal and/or time to said portable terminal.

29. The electronic commerce system according to claim 27, wherein said shop terminal has a database and said
25 distribution control apparatus stores product information selected by said portable terminal user in the database of the shop selected by said portable terminal

user.

30. The electronic commerce system according to claim
27, wherein the product information sent from said
5 information transmission apparatus to said portable
terminal includes an electricity bill, telephone bill,
gas bill or water bill.

31. The electronic commerce system according to claim
10 27, wherein said portable terminal displays said
encrypted product information as a barcode.

32. An electronic commerce system comprising:

15 a portable terminal; and
a shop terminal equipped with a barcode reader
provided at a shop where products are delivered, wherein
said portable terminal includes a reading section that
reads information stored in a bridge medium, reads product
information stored in said bridge medium, displays the
information on said product information on the display
20 section as a barcode, said shop terminal reads the barcode
displayed on said portable terminal from said barcode
reader and conducts commercial transaction based on the
read information.

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33. The electronic commerce system according to claim 32, wherein said bridge medium includes encryption

processing means and said portable terminal reads encrypted product information and displays the information with a barcode.

5 34. An electronic commerce system comprising:

a portable terminal;

a shop terminal equipped with a barcode reader and a collating apparatus provided at a shop where products are delivered;

10 an information transmission apparatus that transmits product information to said portable terminal; and

a distribution control apparatus that controls electronic commercial transaction information that 15 controls electronic commercial transaction information, wherein said distribution control apparatus sends a product purchasing program and product information in storage to said portable terminal through said information transmission apparatus, said portable 20 terminal displays product related information formed according to said received product purchasing program and product information on the display section, displays the product related information selected by the portable terminal user with reference to the product related 25 information displayed on the display section as a barcode on the display section, said barcode reader reads the barcode displayed on the portable terminal and said

collating apparatus collates the barcode information read by the barcode reader with the control information sent from said distribution control apparatus.

5 35. An electronic commerce system that uses data displayed with a barcode as electronic money.

36. An electronic commerce system comprising:

10 a portable terminal;
a shop terminal; and
a distribution control apparatus, wherein
processing of purchase ordering of a product or service
is performed with the distribution control apparatus
beforehand, the shop terminal receives information
15 necessary for settlement processing from the distribution
control apparatus beforehand when the portable terminal
user visits the shop to conduct settlement processing,
and displays information necessary for settlement
processing on the display section of the portable terminal
20 as a barcode when the portable terminal user visits the
shop, the barcode reader at the shop terminal reads the
barcode, collates the content of the barcode read with
the information necessary for the settlement processing
received by the shop terminal beforehand and conducts
25 settlement processing.

37. The electronic commerce system according to claim

36, wherein the information necessary for said settlement processing includes time information when purchase order processing is conducted between said portable terminal and said distribution control apparatus.

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38. The electronic commerce system according to claim 36, wherein the portable terminal encrypts information necessary for settlement processing and displays the encrypted information with a barcode.

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39. The electronic commerce system according to claim 36, wherein the distribution control apparatus encrypts information necessary for settlement processing using a predetermined encryption key and sends the encrypted information to the portable terminal, the portable terminal displays the information necessary for the encrypted settlement with a barcode, the shop terminal sends the information read from the barcode to the distribution control apparatus, the distribution control apparatus decrypts the information received from the shop terminal using the own encryption key and authenticates the settlement.

40. The electronic commerce system according to claim 36, wherein the distribution control apparatus adds signature data to information necessary for settlement and sends the information to the portable terminal and

shop terminal.

41. The electronic commerce system according to claim 36, wherein the portable terminal and shop terminal can 5 directly communicate with each other by radio and the shop terminal rewrites the balance data after settlement of the portable terminal by radio.

42. An admission control system comprising:

10 a portable terminal;
 an admission control terminal equipped with a barcode reader and collating apparatus provided at the entrance; and
 an information transmission apparatus that
15 transmits admission information to said portable terminal, wherein said portable terminal displays the admission information received from said information transmission apparatus as a barcode, said admission control terminal admits the entry of said admission applicant according
20 to the barcode information displayed on said portable terminal.

43. The admission control system according to claim 42, wherein said admission control terminal further comprises 25 communicating means for radio communication with said portable terminal and admits the entry of said applicant according to the radio communication information with

said portable terminal in addition to said barcode.

44. A local radio system comprising:

5 a first communication terminal; and
 a second communication terminal capable of
communicating with said first communication terminal and
equipped with a barcode reader, wherein the display
section of said first communication terminal displays
the identification information of the first communication
10 terminal with a barcode, said second communication
terminal reads the barcode displayed by said barcode
reader, searches for said first communication terminal
indicated by said identification information from a
plurality of communication terminals and carries out
15 radio communication with said first communication
terminal.

45. The local radio system according to claim 44, wherein
said barcode displayed by said first communication
20 terminal is a two-dimensional barcode.